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Cooperative Involvement In Grain Marketing



COOPERATIVE INVOLVEMENT IN GRAIN MARKETING

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Abstract

This report focuses on the major grain-related issues facing the cooperative community, with particular emphasis on the adjustments made to a declining export situation and transportation deregulation. Cooperatives have played an important role in the origination and assembly of grain for domestic and export markets. Strong competitive pressures outside and within the cooperative community and other external forces are forcing cooperatives to carefully assess their present situation with an eye on the future. Considerable adjustment in terms of physical and financial structure, organization, intercooperative coordination and cooperation, and operating policy will be needed to ensure themselves a future in grain marketing.

Key Words: Cooperatives, grain, marketing, export, transportation, deregulation, commitment, cooperation, management, facilities

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Preface

In 1975, Farmer Cooperative Service, now Agricultural Cooperative Service (ACS), made a comprehensive study of the export potential of grain cooperatives. This was the beginning of a period of steadily increasing U.S. grain exports that continued through the seventies. During 1975 to 1982, grain cooperatives and the grain industry in general operated in a period characterized by an expansion of export demand and domestic production; grain embargoes; domestic transportation shortages and crises followed by surpluses; and Government regulations dealing with air pollution, elevator safety, grain inspection, and transportation. During this period, some local grain cooperatives either closed or merged with others for reasons that include rail abandonment or reduced rail service. The unit-train movement of grain to export ports increased in response to lower rail transportation rates. Cooperatives expanded their elevator facilities and transportation equipment to handle the increasing grain volumes. Cooperatives exporting grain wrestled with the effects of export embargoes and rising inspection costs. Net savings from grain operations were erratic, as some grain regionals prospered while others suffered setbacks.

ACS, through its contacts with grain cooperatives and those working with grain cooperatives, received strong signals that there was a need to reevaluate the total cooperative grain marketing system, with emphasis on looking to the future. This task was undertaken by an ACS study team that contacted officials of grain cooperatives, cooperative educators, extension specialists, banks for cooperatives, and others to determine their views on the status, progress, problems, and future of grain cooperatives.

The team reviewed recent studies by other researchers, and analyzed and evaluated available primary and secondary information relating to grain cooperatives. The team did not find firm solutions to the problems and concerns shared by grain cooperatives, but the report does pull together a body of relevant information, presents alternatives, and offers suggestions. The report should be useful to cooperative directors, managers, banks financing cooperatives, and others who work with and for grain cooperatives.

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Highlights

Grain cooperatives are an important participant in the U.S. grain marketing system. Farm-level purchases of grain by local cooperatives account for about 40 percent of U.S. farm grain sales while regional and interregional grain cooperatives assemble about 40 percent of U.S. grain exported. Cooperative grain handling operations represent 28 percent of U.S. elevator facilities and 38 percent of total U.S. elevator storage capacity. Their diversity includes operating about 21 percent of the soybean processing industry's crushing capacity. They operate soy oil refining plants, rice mills, flaxseed and sunflower seed crushing plants, and a durum flour mill.

Cooperatives are emerging from a decade of significant structural and operational change, ranging from local and regional mergers and interregional adaptations to adjusting marketing operations in response to transportation deregulation and high operating costs. The changing structure of production agriculture, rail abandonments, deregulation, and world supply/demand relationships will require continued adjustments by grain cooperatives in the years ahead.

Growth of local cooperatives via merger and acquisition will continue. The resulting associations will likely have fast loadout facilities and will provide a wide range of grain marketing services. In many cases, the local cooperative will duplicate facilities and services of the regionals, requiring coordinated planning and adjustment.

Direct movement of grain from the farm to fast throughput elevators and processors is increasingly becoming a major cooperative structure concern. In many cases, these direct movements bypass the local cooperative, depriving it of the volume and revenue required for efficient operation. As the trend toward larger farms and rapid grain handling capability continues, the pressure on cooperatives to get their houses in order from an organizational and structural standpoint will intensify.

Deregulation of the transportation industry is expected to result in rate and service innovations that will affect costs and grain movement. Such innovations are expected to complement the growing unit-train and barge movement of grain, particularly to port elevator locations. The transportation industry under deregulation will bear close monitoring and adjustments by cooperatives to ensure effective merchandising of member grain.

Cooperatives continue to be hampered in grain operations by a lack of member commitment at the local, regional, and interregional levels. Failure to fully support the cooperative grain marketing system with committed grain volumes has forced regionals and interregionals to purchase increasing amounts of nonmember grain to maintain physical operating efficiency. Commitment to the cooperative system is important to the origination of grain for both the domestic and export markets.

The cooperative community should seriously consider increased coordination of the grain exporting function. Some good lessons have been learned from past attempts to become more involved in the export markets. If cooperatives do not actively look for ways to coordinate export efforts, fewer cooperatives will remain in that business, and then only in a fragmented way.

Grain cooperatives need to improve their capital base and increase operating capital to position themselves for assuming greater risks associated with larger grain positions, facilities, financing, and foreign sales. Cooperatives will likely try various means to secure more equity capital from members.

Developments of the past decade have clearly tested grain cooperative management. This function is rapidly becoming more complex and more demanding for both managers and board directors. Tomorrow's managers will have to understand fully the complexities of grain merchandising, develop a keen sense of cost control, have excellent knowledge of financial needs and sources, and have the ability to delegate responsibility effectively.

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Grain cooperatives are experiencing a period of considerable adjustment in their operations to survive today and to pursue challenges and opportunities tomorrow. Economic conditions in the early 1980's have been markedly different from those that prevailed—and to which grain cooperatives adjusted—in the 1970's. The rapid growth in grain export demand in the 1970's has ended and is now declining; the U.S. economy is expanding, although slowly; interest rates are still relatively high; operating costs are increasing and fixed costs are high; grain inventories are large; and today's Government programs designed primarily to discourage fence row to fence row grain production reduce the grain volume handled by elevators and thus their income.

Adjustments made by grain cooperatives and how well they are able to meet the challenges of the 1980's are the focus of this study. How well they are able to meet the challenges is important because of their extensive involvement in the marketing of U.S. grain.

COOPERATIVE INVOLVEMENT

Cooperatives make a substantial contribution to the marketing of domestically produced grain. Farm-level purchases by mostly local cooperatives account for about 40 percent of total U.S. farm grain sales. Cooperatives, primarily grain regionals, are also heavily involved in the assembly of grain for export; in 1982, the volume was equivalent to about 40 percent of total U.S. grain exports.

Grain Procurement

The origination of grain by cooperatives is affected importantly by outside forces over which they have little control. These include competing grain firms and facilities, transportation rates and services, Government farm programs, supply of and demand for grain, marketing practices of others, and general economic conditions. Cooperatives can, however, exert influence over important aspects of grain procurement, such as pricing, contracting, financing, locating co-op facilities for grain assembly, storing, coordinating inbound grain movement, and controlling transportation equipment. Pricing is probably management's single most important recurring problem affecting profitability of operations.

Little change has occurred in the basic pricing methods and arrangements by grain producers and cooperatives when procuring grain. Cash settlement at time of delivery continues to be the dominant method of payment for grain acquisition. Options such as delayed pricing, market pooling, and forward contracting are available, but their use is limited. Delayed pricing gained popularity in the 1970's, but its use declined subsequently because of producer fear of elevator bankruptcy.

When procuring grain, typically on a cash basis, cooperatives may specify delivery to optional points at specified dates with appropriate price differentials. In recent years, direct movement of grain from the farm to shipping elevators and processors has increased. The local cooperative elevator is bypassed, eliminating the double handling of grain. Sometimes the cooperative gets credit for the sale.

Grain procurement beyond the local level within the cooperative system has been coordinated largely by the regional grain cooperatives. Regionals purchase grain mostly from local cooperatives but also directly from producers and from noncooperative businesses, providing or arranging for pricing, financing, storage, and transportation services. Some of the larger local cooperatives have developed or are developing their own procurement and marketing system. They are relying increasingly less on the regionals for pricing and other services associated with procurement, viewing the regionals as a marketing alternative.

Grain Handling Facilities

Many cooperatives have built new and/or remodeled existing facilities in the past decade. These improvements, particularly unit-train loading, permit faster grain handling, reduced storage costs, improved dust control systems, and lowered operating costs. Many of the facilities were built on the main lines of major railroads.

Not all grain production areas are providing the additional facilities and services. The need for more on-farm drying and storage facilities, coupled with Government storage program incentives, has led to occasional shortages of commercial grain storage facilities. In some areas, it is traditional for grain producers to store at local elevators because it relieves them of the on-farm storage investment cost and the cost of

maintaining the quality of the grain during storage. In some areas of the country where the cooperatives have failed to keep pace with their membership's grain handling and storage needs, outside interests have come into the area and built facilities to buy grain direct from farmer-members.

Grain farmers have increased their investment in on-farm storage facilities and grain harvesting machinery and equipment. This has shortened the harvesting period and, coupled with larger volumes harvested, placed an added burden on the grain elevator and marketing system. A producer-member's construction of on-farm grain storage increases the possibility of bypassing the local and selling to someone else. Some cooperatives built centrally located condominium storage facilities where producers finance the capacity they feel they will need. Unused storage space can be subleased. The producer pays a management fee to have the grain kept in condition.

Cooperatives' Share of U.S. Facilities

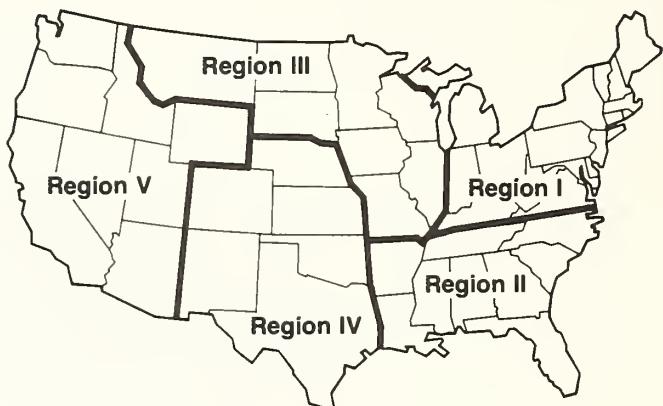
In 1980, there were 2,339 local cooperative associations at 4,079 locations in the United States handling grain and operating grain facilities.¹ They handled nearly 4.6 billion bushels of grain received at the local, or first-handler, level. This volume represented about 40 percent of total U.S. farm grain sales. The cooperatives provided about 2.3 billion bushels of storage capacity for their members, of which 81 percent was upright and 19 percent flat. About 89 percent of the storage capacity was licensed by either the Federal government or a State, or both.

Grain-handling cooperatives, local and regional combined, had 28 percent of the U.S. elevator facilities and 38 percent of total U.S. elevator storage capacity in 1982 (table 1). Cooperative numbers and storage capacity are concentrated in the central third of the country (regions III and IV, fig. 1), which accounted for 72 and 74 percent of their respective U.S. totals.

U.S. export port grain storage capacity in 1981 totaled 368 million bushels for 73 facilities, of which 82 million bushels, or 22 percent, was owned by grain cooperatives (table 2). More than 73 percent of all U.S. grain storage capacity was about equally divided between the Great Lakes (39 percent) and the Gulf (34 percent). Comparable proportions for grain cooperatives were 46 and 37 percent of total cooperative storage capacity.

Port grain storage capacity of U.S. cooperatives expanded by 22 million bushels during 1975-81, greater than the net increase of 18 million bushels for the United States (table 3).

Figure 1
ACS Grain Production/ Marketing Regions, 1983



This accounts for the increase in cooperatives' share of capacity from 17 percent in 1974 to 22 percent in 1981. Fifty percent of the increase in cooperative port capacity occurred on the Gulf Coast, followed by the Great Lakes with 21 percent.

Regional and Interregional Facilities Regional grain cooperatives (fig. 2) have steadily improved and expanded terminal and subterminal grain facilities over the years. More recently, this included the acquisition of terminals, expansion of existing facilities, and the new construction of river and inland subterminals. Several country terminals or subterminals were built to facilitate multirail car and unit-train shipments. Regionals own and operate several processing plants. In response to the transportation uncertainties that arose during the 1970's, regionals began leasing and purchasing rail cars and water transportation equipment. In 1981, regionals and interregionals operated 118 terminal and subterminal elevators on navigable water and at interior points, compared with 83 in 1975 (table 3). In addition, 9 of the regionals operated 380 country line elevators in 1981 and 6 operated 357 in 1975.

Collectively, the grain regionals and interregionals had a storage capacity of 494 million bushels in 1981, compared with 400 million in 1975, an increase of nearly 24 percent. This capacity was at terminal, subterminal, and processing locations. Of the 1981 total, 58 million bushels were on navigable rivers, 81 million at ports, and 355 million at interior points (table 3). Their on-water storage capacity represented 27 to 28 percent of the total in both years.

The interregional grain cooperatives were created by regionals to facilitate the assembly of grain for export. Two of the

¹Marketing and Transportation of Grain by Local Cooperatives, ACS, USDA, Research Report Number 35, 1984.

original four are operational today, Farmers Export Company (FEC) and Mid-States Terminals, Inc. The FEC built a facility at Ama, La., and purchased an existing elevator at Philadelphia, Pa. FEC controls slightly more than 9 million bushels of storage capacity. Mid-States Terminals, Toledo, Ohio, operates a 9-million-bushel concrete elevator. Members of Mid-States are Ohio Farmers Grain and Supply Corp., Landmark, and Michigan Elevator Exchange (now Agra Land).

During the late 1970's, regional grain cooperatives found it

necessary to have their own rail hopper cars to ensure the timely movement of large volumes of grain to export ports. At the end of fiscal 1975, 10 grain regionals leased or owned about 4,100 hopper cars. Five years later, 13 of the regionals leased or owned more than 9,000 hopper cars. The number dropped to about 8,500 cars in 1981 as the rail car shortage situation in the 1970's became a surplus situation by the end of the decade.

In July 1974, Agri-Industries, Growmark, Harvest States, MFA, and CF Industries jointly purchased a barge company

Table 1—Number of cooperative grain storage facilities and storage capacity, 1982

Region	Number of facilities			Grain storage capacity		
	Total U.S. ¹	Cooperatives ²	Co-op share	Total U.S. ¹	Cooperatives ²	Co-op share
--- Number ---						
I	3,065	573	19	951	285	30
II	1,946	273	14	672	240	36
III	5,442	1,965	36	2,666	1,092	41
IV	3,146	1,049	33	2,484	971	39
V	1,092	322	29	496	210	42
Total	14,691	4,182	28	7,269	2,798	38

¹Source: *Grain Stocks*, Crop Reporting Board, USDA.

²Source: *Marketing and Transportation of Grain by Local Cooperatives*, Research Report No. 35, 1984, ACS, USDA. *Regional Grain Cooperatives, 1980 and 1981*, Research Report No. 27, 1983, ACS, USDA.

Table 2—U.S. export port grain elevator capacity for cooperatives and noncooperatives, by coastal area, mid-1981

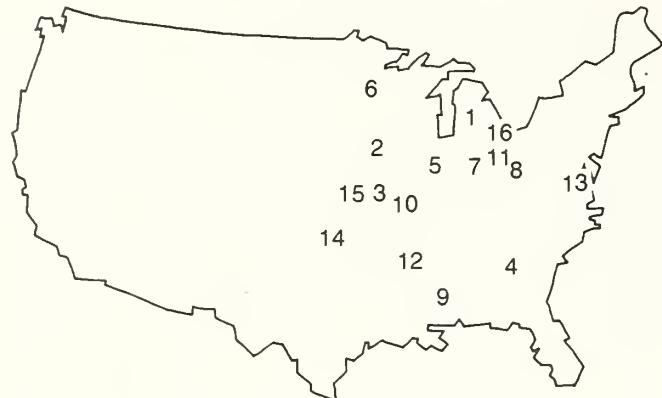
Item	Unit	Coastal area				Total
		Great Lakes	Atlantic	Gulf	Pacific	
Total United States:						
Facilities	Number	23	10	26	14	73
Storage volume	1,000 bu.	144,620	43,933	124,765	54,547	367,865
Distribution	Percent	39.3	12.0	33.9	14.8	100.0
Grain co-ops:¹						
Facilities	Number	4	2	6	1	13
Storage volume	1,000 bu.	37,300	7,650	30,092	6,752	81,794
Distribution	Percent	45.6	9.3	36.8	8.3	100.0
Nonco-ops:²						
Facilities	Number	19	8	20	13	60
Storage volume	1,000 bu.	107,320	36,283	94,673	47,795	286,071
Distribution	Percent	37.5	12.7	33.1	16.7	100.0
Grain co-ops' storage volume of total						
	Percent	25.8	17.4	24.1	12.4	22.2

Sources: Unpublished ACS and AMS data.

¹Primary regional (16) and interregional (3) grain cooperatives.

²Estimated (total for United States less grain cooperatives).

Figure 2
Headquarters of Regional and Interregional Grain Cooperatives, 1984



Primary Regional Grain Cooperatives

1. Agra Land, Inc., Lansing, Mich.
2. AGRI Industries, Des Moines, Iowa
3. Far-Mar-Co., Inc., Kansas City, Mo.
4. Gold Kist, Inc., Atlanta, Ga.
5. GROWMARK, Inc., Bloomington, Ill.
6. Harvest States Cooperatives, St. Paul, Minn.
7. Indiana Farm Bureau Cooperative Assn., Inc., Indianapolis, Ind.
8. Landmark, Inc., Columbus, Ohio
9. MFC Services (AAL), Madison, Miss.
10. Missouri Farmers Assn., Inc., Columbia, Mo.
11. Ohio Farmers Grain and Supply Corp., Fostoria, Ohio
12. Riceland Foods, Inc., Stuttgart, Ark.
13. Southern States Cooperative, Inc., Richmond, Va.
14. Union Equity Cooperative Exchange, Enid, Okla.

Interregional Grain Cooperatives

15. Farmers Export Co., Kansas City, Mo.
16. Midstates Terminals, Inc., Toledo, Ohio

Table 3—Number and storage capacity of regional and interregional grain cooperative elevators, fiscal years 1975 and 1981¹

Item	1975	1981
<i>Number</i>		
Elevator location:		
At interior points	53	80
On navigable rivers	21	26
Great Lakes	4	4
Gulf Coast	3	5
Atlantic Coast	1	2
Pacific Coast	1	1
Total	83	118
<i>Million bushels</i>		
Storage capacity location:		
Interior points	291	355
Navigable rivers	50	² 58
Port areas	59	81
Total	400	494
Percent on water	27	28

¹Fiscal year 1981 data for 16 primary regional and 3 interregional grain cooperatives. Fiscal year 1975 data for 14 and 4, respectively.

²Sixty percent located on Mississippi River system.

with 7 tow boats and about 200 covered hopper barges. Reasons for the purchase were (1) the increased cost of barge grain and increased difficulty in obtaining barges and in negotiating barge contracts attributable to the surge in grain exports in late 1972, (2) the cost-savings to many barge companies associated with the exclusive hauling of grain southbound, (3) the expectation that barge equipment would continue to be difficult to obtain and hauling rates would continue to rise, and (4) the barge cost reduction to all members associated with the backhauling of fertilizer in barges used for southbound grain shipments.

This interregional cooperative was called Agri-Trans Corporation, and is headquartered in Sunset Hills, Mo. Agri-Trans Corporation's barge fleet—now 9 tow boats and about 335 barges—is used in the movement of principally grain and fertilizer on the Mississippi River and its major tributaries.

Grain Processing

Cooperatives have not moved aggressively into grain processing, except for feed manufacturing and soybean processing. Cooperatives operated 15 soybean processing plants in 1974, with a total daily crush capacity of 14,685 tons. In 1981, regional and local cooperatives were operating 19 crushing plants with a daily crush capacity of 25,790 tons, a 76-percent increase from 1974. Two plants were sold during

1981 to noncooperative interests, reducing the crush capacity to 21,515 tons. Cooperative processing plants account for about 21 percent of the industry's total crushing capacity.

In 1981, 9 soybean processing plants with 42 million bushels of storage capacity were operated by regionals. This compares with 8 plants and 35 million bushels of storage capacity in 1975. Regionals also operated other grain processing plants (table 4).

Some interest has developed in recent years in cooperatively owned corn processing plants. One went into operation recently in Minnesota. High building costs, high interest rates, and a lack of in-house expertise seem to have slowed cooperative entry into this area.

Riceland Foods, Land O'Lakes, and Harvest States are the most active in soy-oil refining. With refineries at Stuttgart and Helena and a packaging plant in New Orleans, Riceland markets finished consumer products. Land O'Lakes maintains an extensive consumer sales organization and markets its own soy oil production as well as soy oil purchased from other outlets.

Recently established is Ag Processing, Inc. (API). Soybean processing plants included in API are Boone Valley's at Eagle Grove, Iowa; Farmland's at Van Buren, Ark., Sergeant Bluff, Iowa, and St. Joseph, Mo.; and Land O'Lakes' at Fort Dodge and Sheldon, Iowa, and Dawson, Minn. This new organization is headquartered in Omaha, Nebr.

Harvest States has three processing subsidiaries. The Honeymead Division processes soybeans, flaxseed, and

Table 4—Selected characteristics of primary regional and interregional cooperative associations, fiscal years 1975 and 1981

Item	Unit	Fiscal year ¹	
		1975	1981
Regional cooperatives operating			
line elevators	Number	6	9
Line elevators operated	Number	357	380
Storage capacity	Mil. bu.	85	145
Soybean processing plants			
operated by regionals	Number	8	9
Storage capacity	Mil. bu.	35	42
Other grain processing plants			
operated by regionals ²	Number	6	7
Storage capacity	Mil. bu.	16	31

¹Fiscal year 1975 data are for 14 regional and 4 interregional grain cooperatives. Fiscal year 1981 data are for 16 regional and 3 interregional grain cooperatives.

²Excludes feed mills.

sunflower seed. Sunflower oil and soybean oil are used in the manufacture of their consumer packages of margarine, vegetable oils, and salad dressings. The linseed oil is used in paint manufacturing. In 1977, Honeymead purchased Holsum Foods and formed the Honeymead Holsum Division, putting Harvest States farmers in the consumer foods market.

Harvest States' Amber Milling Division is the only cooperatively owned durum mill in the Nation. It has been providing semolina and durum flours in special blends for five decades. Froedtert Malt Division of Harvest States is a leader in the malt industry, specializing in production for brewing and distilling, as well as for specialty flour products.

Organizational Structure

Many changes in the organizational structure of cooperatives marketing grain have occurred since the early 1970's. Some divested themselves of activities, others added compatible business ventures, some added subsidiary businesses not related to grain marketing, and several existing cooperatives merged to gain economies of scale.

Data on grain cooperative mergers for the past decade are incomplete. However, it is generally known that numerous mergers occurred at the local level. Several regional grain marketing cooperatives merged with each other and with farm supply regionals during this period to improve operating efficiency and better serve producer-members. Some examples:

- FAR-MAR-CO merged with Farmland Industries and became its subsidiary to cut overhead and realize other operational and administrative efficiencies. FAR-MAR-Co's main office building at Hutchinson, Kans., was sold and most of its personnel moved to Farmland's Kansas City office.

- Illinois Grain Corporation merged with GROWMARK, which, in turn, purchased St. Louis Grain, an interregional grain cooperative.

- Two grain regionals, Farmers Union Grain Terminal Association (GTA) and North Pacific Grain Growers (NPGG), recently merged to form Harvest States Cooperatives, headquartered in St. Paul.

The origination and assembly of grain and its movement to domestic and export positions by cooperatives is sometimes facilitated by business arrangements among cooperatives. Examples of these different types of joint ventures follow:

- Farmers Commodity Corporation, made up of two or more regional grain cooperatives, has been established. It offers members a variety of services such as futures trading, financial, and related services.

- AGRI Industries has purchased grain-related facilities and has engaged in non-grain-related ventures. AGRI purchased an export elevator at Houston, a rail car rehabilitation facility, and a heavy equipment leasing company. AGRI has begun leasing the elevators formerly owned by the bankrupt Producers Grain Corporation and established a subsidiary called Agri-Producers.

- Kansas City Terminal Elevator Co. in 1982 ceased operating as a grain merchandiser, and is now used solely as a storage and handling facility for its owners, FAR-MAR-CO and MFA.

- Agri-Trans is an example of joint ownership that serves its members in the transport of grain and fertilizer materials. Farmers Export Co. offers regional members an export outlet for grain. These are but some of the examples of cooperative joint ownership, where the cooperatives formed have benefited from size and strength in grain marketing.

As a means of strengthening cooperative performance, increasing financial strength and business "flexibility," and lessening their dependence on others, a group of American and foreign cooperatives formed INTRADE. The American cooperative partners of Intrade are Gold Kist, Land O'Lakes, Agway, Indiana Farm Bureau Cooperative Association, Landmark, and Citrus World. The foreign cooperatives are United Cooperatives of Ontario (UCO) of Canada, Cebeco-Handelstaad of the Netherlands, Deutsche Raiffeisen-Warenzentrale Gesellschaft (D.R.W.Z.) GMBH of Germany, Getreide Import Gesellschaft GMBH of Germany (G.I.G.), and Union Nationale Des Cooperative Agricoles De Crex Cereales (UNCAC) of France.

Through INTRADE, these cooperatives purchased a major portion of Toepfer Holding Company, resulting in the formation of Alfred C. Toepfer International. This acquisition makes available to INTRADE members international grain trade information and expedites trading in the world grain markets. The Toepfer operation is composed of nearly 400 employees in 22 international buying and selling offices, and offers time-chartering services, pelletizing and elevator operations, and other services. The venture has been beneficial to all parties.

Cooperative Grain Marketing

Cooperatives participate heavily in the grain marketing system with a network of local elevators that receive grain from both member and nonmember producers. Local elevator operations complement the operations of cooperatively owned terminal, subterminal, and export port elevators and processing plants.

Grain movement by cooperatives generally occurs in four marketing stages: (1) farm to first cooperative receiver,

(2) local cooperative shipments, (3) regional cooperative shipments, and (4) interregional cooperative shipments (fig. 3). In recent years, however, cooperative grain marketing has tended to bypass one or more of these stages.

The steady deterioration of rail service, the rise in the number of unit-train elevators in the Corn Belt, and vigorous export demand during the 1970's contributed to an increasing proportion of grain moving directly from the farm to unit-train elevators, subterminals, and processors. The cooperatives were active participants in this trend although many of the smaller, poorly located, or inefficient cooperative elevators were victimized by it.

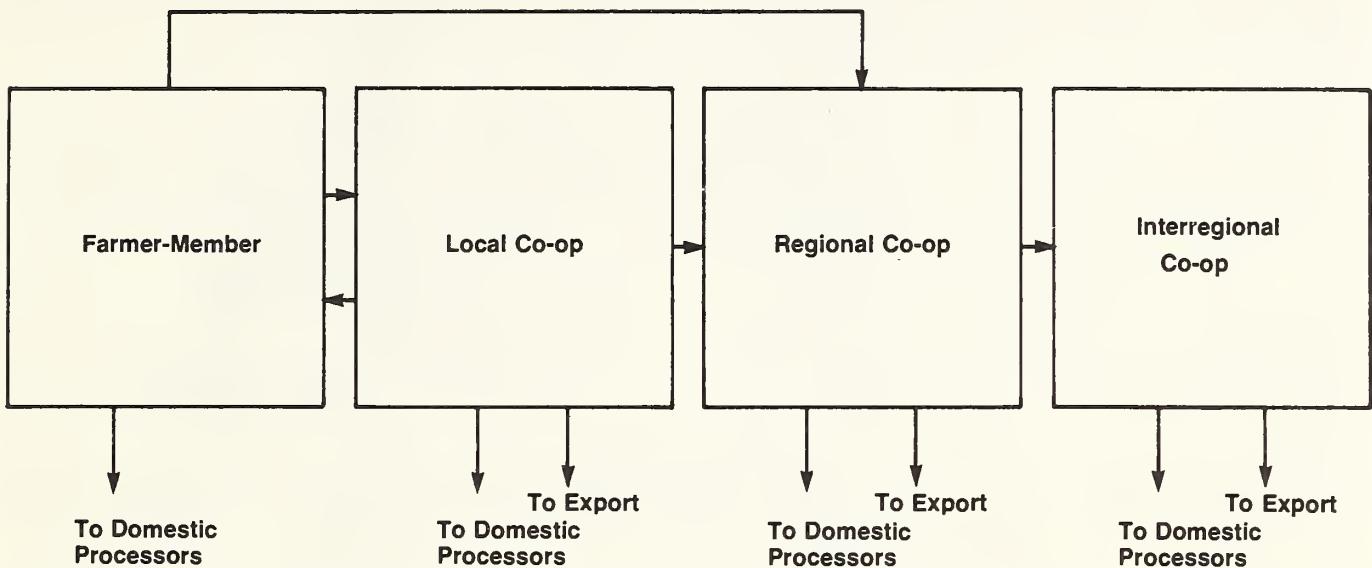
The movement of grain from local cooperative elevators depends greatly on the elevator's loadout and shipping capability which, in turn, depends greatly on available transportation. The mode of transportation used to move grain varies depending on factors like location of production and storage, the opportunity to backhaul, and total combination of transport costs. Trucking often is the lowest cost mode for short hauls (less than 200 miles). Grain transported greater distances usually moves by rail or barge. However, some railroads instituted "gathering rates" to compete with short-haul trucking. Probably the greatest advance in local cooperative grain shipping in the past 10 years was realized by cooperatives that built unit-train or subterminal elevators and acquired the capability of handling relatively large volumes. Many smaller elevators shifted to truck transportation as they began delivering grain to subterminals instead of terminal elevators. Local cooperatives that expanded and acquired multicar, unit-train, and barging capabilities, shipped increasingly larger volumes to both cooperative and noncooperative export elevators. Such shipments often represented sales through a regional cooperative even though the grain was shipped directly to a port elevator.

Regarding direct delivery, there is a trend toward narrowing price differentials between the prices paid to producers by the regional and local cooperatives. There is also a narrowing trend between prices paid to local and regional cooperatives by the cooperative port elevator. In some instances, noncooperative grain terminals are paying the same price for all deliveries, whether by farmers, local elevators, or regional cooperatives. Where this happens, the smaller, less efficient elevators lose even more business. To survive, they will have to engage in or expand farm supplies and services.

Share of Marketing Activity

Traditionally, local cooperatives allowed the terminals to provide a major portion of the grain transportation and marketing services. Today, the future role of regionals is being questioned as the larger locals become more independent with respect to transportation and marketing activities.

Figure 3
Cooperative Grain Marketing Channels



The Locals The volume of 1979 crop year grain handled by 2,339 local cooperative grain elevator associations amounted to 4.6 billion bushels, an average of nearly 2 million bushels per association.² This included regular market, grain bank, and Commodity Credit grain. Grain handled in the regular market amounted to nearly 4.4 billion bushels, or 96 percent of the total volume handled. The remaining 4 percent was about equally divided between grain bank grain and Commodity Credit grain.

Corn was the largest volume of grain handled, followed by wheat, soybeans, rice, grain sorghum, barley, oats, and others. Local cooperatives handled more than 40 percent of the off-farm grain sales from the 1979-80 crop year, and disposed of their grain by selling 9 percent to farmers and truckers in the immediate trade area, 60 percent to regional and local cooperatives, and 31 percent to noncooperatives. The volumes of grain handled were corn, at 41 percent of the total; wheat, 25 percent; soybeans, 16 percent; and grain sorghum, 5 percent.

The Regionals Grain is increasingly being shipped directly from regional cooperative terminals and affiliated local elevators to domestic buyers and export elevators. This is largely because of the increasing use of multicar, unit-train, and barge shipments. Until recently, this trend was more pronounced in the corn and soybean regions than in the wheat-producing regions.

The regional grain cooperatives represent all of the major grain-producing areas of the United States. Most regionals merchandise feed grains. Some are primarily wheat merchandisers. Some of the feed grain merchandisers also handle significant volumes of soybeans. The principal types of grain merchandised by and the principal State(s) of the members of each regional and interregional grain cooperative are shown in table 5.

During fiscal 1975-81, regional cooperatives maintained their share of the domestic and export markets, and actually increased their share of grain assembled for export from inland points to port elevators. Their share of export ship loadings also increased.

The regional and interregional grain cooperatives handled a total of 1.6 billion bushels in fiscal 1975 and 3 billion bushels in fiscal 1981 (table 6). The 3 billion bushels handled was equivalent to 33 percent of total U.S. off-farm grain sales in the 1980-81 crop year. This compares with 23 percent for the 1.6 billion bushels in fiscal year 1974 (crop sales year 1974-75). The largest volumes of grain handled in fiscal 1975 were wheat, corn, and soybeans. By fiscal 1981, corn volume had increased 166 percent, soybean volume nearly 135 percent, but wheat volume just 34 percent.

As farm grain sales increased steadily during the 7-year period, grain sales by regional grain cooperatives relative to total U.S. farm sales rose gradually, from an estimated 23 percent in the 1974-75 crop year to an estimated 30 percent during the 1980-81 crop year. Regional cooperatives' relative

²Ibid.

Table 5—Principal grains marketed by and major membership States of the regional grain cooperatives, 1984

Name of regional cooperative	Principal grain(s) marketed	Major membership State(s)
AGRI Industries	Corn, soybeans, wheat, sorghum	Iowa, Texas
FAR-MAR-CO	Wheat, corn, soybeans, sorghum	Kansas, Nebraska, Colorado, Texas
Agra Land, Inc.	Corn, wheat, soybeans, oats.....	Michigan
Harvest States Cooperatives.....	Wheat, corn, soybeans, barley..... sunflower seed, oats, rye	Minnesota, North Dakota, South Dakota, Montana, Oregon, Washington, Idaho
Gold Kist	Soybeans, wheat, corn.....	Georgia, South Carolina, Florida, Alabama, Tennessee
GROWMARK.....	Corn, soybeans, wheat.....	Illinois
Indiana Farm Bureau.....	Corn, soybeans, wheat.....	Indiana
Landmark.....	Corn, soybeans, wheat.....	Ohio
Missouri Farmers Association	Soybeans, wheat, corn, sorghum.....	Missouri
MFC Services	Soybeans, wheat	Mississippi
Ohio Farmers Grain and Supply Corp.	Corn, soybeans, wheat.....	Ohio
Riceland Foods, Inc.....	Soybeans, wheat, sorghum.....	Arkansas
Southern States Cooperative	Corn, soybeans, wheat, barley.....	Virginia, Maryland, Delaware, Kentucky
Union Equity	Wheat, sorghum	Oklahoma, Kansas, Texas
Farmers Export Co. ¹	Corn, soybeans, wheat, sorghum	Iowa, Illinois, Kansas, Minnesota, Missouri
Mid-States Terminals ¹	Corn, soybeans, wheat.....	Ohio, Michigan, Indiana

¹Interregionals.

Table 6—Grain sales by regional and interregional grain cooperatives, by type of grain, fiscal years 1975 and 1981

Type of grain	Fiscal year			
	1975		Relative to U.S. farm grain sales ²	Co-op volume
	Co-op volume ¹	Mil. bu.		
Corn	513	17.5	1,367	33.0
Wheat	610	35.7	819	36.1
Soybeans	257	21.2	602	33.6
Sorghum	103	22.2	166	42.3
Barley	40	17.9	44	16.7
Oats	30	13.7	16	10.0
Other grains ³	8	28.5	31	19.9
Total	1,561	23.0	3,045	33.2

¹Regional grain cooperatives only.

²1974-75 and 1980-81 crop years, respectively.

³Rye, flaxseed, and sunflower seed.

sales varies significantly by individual crop. Primary regional and interregional grain cooperatives' estimated relative sales for the 1980-81 crop year varied from 42 percent of sorghum sales, to 33-36 percent of corn, wheat, and soybean sales, to only 10 percent of oats sales.

Marketings of unprocessed or whole grain accounts for the bulk of the regional grain cooperatives' grain business. However, soybean processing and the marketing of the meal and oil represent an important activity for some regional grain cooperatives. Other grains processed include flaxseed, sunflower seed, durum wheat, and barley. In fiscal 1981, regional grain cooperatives marketed only 5.9 percent of their grain through their own processing facilities, compared with 7.0 percent in 1975. At the end of fiscal 1982, only 9 soybean processing plants were owned by grain regionals, 2 fewer than in 1980, and several other plants were temporarily closed because of low processing margins.

Domestic Grain Disposition In fiscal 1981, the regional grain cooperatives processed 178.6 million bushels of grain, only about 6 percent of their total disposition. This compares with 111.9 million bushels in fiscal 1975. Their domestic sales of grain in fiscal 1981 totaled 834.7 million bushels, or 27 percent of total disposition.

The grain type and geographic farm grain sales patterns for regional grain cooperatives are similar to those for total U.S. farm grain sales. However, the net volume of grain sold by regional grain cooperatives relative to total farm grain sales varies considerably by region and type of grain handled. In 1981, net grain sales by the regionals varied from an estimated 12.5 percent of total farm grain sales in region V to an estimated 39 percent in region IV (table 7). The regionals generally accounted for only small relative sales of the minor crops, but were importantly involved in farm sales of most major crops in most regions.

Table 7—Grain sales of 16 regional grain cooperatives relative to total farm sales of grains, by type of grain and region, 1980-81¹

Type of grain and sales level	Unit	Total U.S.	Region ²				
			I	II	III	IV	V
Corn:							
Regional total	Bil. bu.	4,145.9	1,062.8	142.0	2,215.4	672.1	53.6
Co-op sales	Bil. bu.	1,182.1	296.6	11.1	687.4	186.1	0.9
Share	Percent	28.5	27.9	7.8	31.0	27.7	1.7
Wheat:							
Regional total	Bil. bu.	2,265.5	189.1	88.0	605.0	944.4	439.0
Co-op sales	Bil. bu.	783.5	47.9	28.8	214.4	424.3	68.1
Share	Percent	34.6	25.3	32.7	35.4	44.9	15.5
Soybeans:							
Regional total	Bil. bu.	1,792.5	385.2	368.9	946.1	92.3	0
Co-op sales	Bil. bu.	548.3	115.6	83.2	296.3	53.2	—
Share	Percent	30.6	30.0	22.6	31.3	57.6	—
Sorghum:							
Regional total	Bil. bu.	392.5	0.9	7.6	30.2	342.1	11.7
Co-op sales	Bil. bu.	169.7	—	0.2	18.6	149.8	1.1
Share	Percent	43.2	—	2.6	61.6	43.8	9.4
Other:³							
Regional total	Bil. bu.	578.0	45.2	9.3	352.0	32.5	139.0
Co-op sales	Bil. bu.	90.8	3.7	0.7	75.4	0.8	10.2
Share	Percent	15.7	8.2	7.5	21.4	2.5	7.3
All crops:							
Regional total	Bil. bu.	9,174.4	1,683.2	615.8	4,148.7	2,083.4	643.3
Co-op sales ⁴	Bil. bu.	2,774.4	463.8	124.0	1,292.1	814.2	80.3
Share	Percent	30.2	27.6	20.1	31.1	39.1	12.5

Source: *Field Crops, Production, Disposition, Value*, CrPrI(8), SRS, USDA, April 1981. ACS, USDA.

¹1980 crop year for region and U.S. totals; fiscal years ended in 1981 for the 16 regional grain cooperatives.

²See figure 1. ³Oats, barley, rye, flaxseed, sunflower seed.

⁴Co-ops represented number 5, 3, 4, 3, and 1, respectively, in regions I-V.

Export Grain Disposition In 1981, regional grain cooperatives moved nearly 68 percent of their total grain volume to export elevators. This compares with nearly 58 percent in 1975. Regionals assemble and originate a significant portion of total U.S. grain movements to export. This includes sales of grain at inland cooperative elevators to noncooperative buyers for delivery to noncooperative export elevators.

In fiscal 1981, cooperative export elevators handled 1.2 billion bushels, or 60 percent of the grain cooperatives' total grain shipments for export. Among the major grains, the proportion was highest for soybeans at 71 percent, followed by wheat at 66 percent.

The regional grain cooperatives' port share in fiscal 1981 was largest in the Gulf coastal area at 32 percent of total Gulf exports, followed by the Great Lakes at 29 percent (table 8).

Financial Performance

U.S. grain cooperatives have grown substantially in every aspect of marketing since the early 1970's, primarily in response to the large increase in foreign demand for U.S. grains and oilseeds. Growth in assets and volume of sales have

been particularly noteworthy. Most of the following discussion pertains to regional grain cooperatives. The limited information available on local cooperatives is presented in the "financial footnote" that concludes this section.

Asset Growth

Regional grain cooperatives had total assets of about \$4 billion in fiscal 1980 and 1981, double their total assets in fiscal 1974 (table 9). Total assets for individual regionals in 1981 ranged from \$38 million to \$610 million. Current assets, mostly accounts receivable, which represented 59 percent of total assets in 1981, accounted for nearly half the growth in total assets. Investments, primarily in other cooperatives, including Banks for Cooperatives, equalled 11 percent of total assets in 1974, but increased to 16 percent of total assets in 1981. Total value of net fixed assets—investments in property, plant, and equipment—was 2.6 times larger in 1981 than in 1974. The largest annual increase was \$138 million in 1981.

Member equity in regional cooperatives increased from about 33 percent of total assets in 1974 to 37 percent in 1976 and 1977 before declining steadily to about 28 percent today. Member equity relative to net fixed investments declined precipitously from 108 percent in 1974 to 70 percent in 1981.

Table 8—U.S. grain exports and regional grain cooperatives' share, by coastal area, 1980-81¹

Item	Unit	Coastal area			Total
		Great Lakes ²	Atlantic	Gulf	
Total United States:³					
Volume	Mil. bu.	499.8	481.7	2,847.9	943.5
Distribution	Percent	10.5	10.1	59.6	19.8
Grain co-ops:⁵					
Volume	Mil. bu.	144.4	76.8	914.7	76.8
Distribution	Percent	11.9	6.3	75.5	6.3
Nonco-op elevators⁶					
Volume	Mil. bu.	355.4	404.9	1,933.2 ⁷	866.7
Distribution	Percent	10.0	11.4	54.3	24.3
Co-ops' share of U.S. total:					
	Percent	28.9	15.9	32.1	8.1
					25.4

Sources: Grain Market News, selected issues, AMS, USDA. Unpublished ACS data.

¹Corn, oats, barley, grain sorghum, rye, wheat, soybeans, flaxseed, and sunflower seed.

²Includes waterway shipments to Canada.

³Grains officially inspected and/or weighed (excludes sunflower seed) for export during the 1980 crop year as reported by AMS, USDA.

⁴Excludes direct exports from U.S. interior locations.

⁵Net exports of grain, officially inspected and/or weighed (except sunflower seed), through co-op port facilities in fiscal 1981 by primary regional (16) and interregional (3) grain cooperatives.

⁶Estimated (total U.S. less grain cooperatives).

⁷Includes export volumes handled by floating rigs.

(table 9). This drop reflects the continued use of debt to finance capital expenditures.

Debt Trends

Coexistent with the downward trend in net worth has been an upward trend in long-term debt and other liabilities. Long-term debt of the regional grain cooperatives totaled \$0.9 billion in fiscal 1981 compared with \$0.3 billion in fiscal 1974. Sharp increases in 1978 and 1981 accounted for 43 percent of the rise. The debt-equity ratio—a measure commonly used to show the relationship between the capital contributed by creditors (debt) and owners (equity)—decreased from 2.0 in 1974 to 1.7 in 1976 and 1977. The ratio increased sharply in the next 2 fiscal years before leveling off at 2.5 to 2.6. The recent higher ratio means that cooperatives have become more highly leveraged. Creditors, not owner-members, are assuming a greater share of the risk of doing business.

Net Margins History

Aggregate income for 15 of the primary regional grain cooperatives grew from \$8.2 billion in 1974 to \$18.3 billion in 1981 (table 10 and fig. 4). Grain marketing and farm supply sales combined accounted for 99 percent of total revenue throughout the period.

Aggregate net margins (before taxes and patronage refunds) for the period were highest in 1974 at \$233 million. Net

margins declined generally until 1979, as total expenses increased faster than revenues, and then rebounded to \$177 million in 1980 (fig. 4). Net margins then plummeted, to \$75 million in 1981 and \$9 million in 1982, their lowest level since at least 1973. Revenue was up 25 percent in 1981 but total expenses increased \$102 million more than total revenue. In 1982, the decline in revenue exceeded the decline in expenses by \$66 million.

Financial Footnote

Information only for selected years since the early 1970's is available on farmer cooperatives that market grains. This group, numbering about 1,800, showed an increase in aggregate value from \$4.5 billion in 1977 to \$7.5 billion in 1980 (table 11). Total assets per cooperative averaged about \$4.2 million in 1980, compared with about \$2.5 million in 1977. This growth resulted largely from the net effect of an increase in the number of cooperatives reporting total assets of at least \$5 million and a decrease in the number of those reporting less than \$500,000 (table 12). Even though aggregate member equity grew from \$2.2 to \$2.9 billion during this period, member ownership declined from nearly 50 percent of total assets in 1977 to 38 percent in 1980.

GRAIN COOPERATIVE ADJUSTMENTS

The traditional grain marketing system's operational structure is changing, and will continue to do so as economic forces

Table 9—Aggregate balance sheet and selected ratios for 16 regional grain cooperatives, fiscal years 1974-82

Item	1974	1975	1976	1977	1978	1979	1980	1981	1982
<i>Million dollars</i>									
Current assets	1,383	1,443	1,477	1,472	1,776	2,283	2,589	2,339	1,903
Net fixed assets	384	469	546	635	712	771	840	979	926
Other assets	221	300	372	404	449	497	598	626	677
Total assets	1,988	2,212	2,395	2,511	2,937	3,551	4,027	3,944	3,506
Current liabilities	1,045	1,086	1,104	1,141	1,414	1,864	2,159	1,939	1,514
Term debt	292	361	414	449	576	673	759	890	922
Net worth	651	765	877	921	947	1,014	1,109	1,115	1,070
Total liab. and net worth	1,988	2,212	2,395	2,511	2,937	3,551	4,027	3,944	3,506
Net working capital ¹	338	357	373	331	362	419	430	400	389
Current ratio ²	1.32:1	1.33:1	1.34:1	1.29:1	1.26:1	1.22:1	1.20:1	1.21:1	1.26:1
Percent member ownership ³	32.7	34.6	36.6	36.7	32.2	28.6	27.5	28.3	30.5
Ratio member equity to net fixed investment ⁴	107.6	99.5	95.5	88.6	81.6	80.0	77.1	69.5	66.7

¹Current assets minus current liabilities.

³Proportion net worth of total assets.

²Current assets divided by current liabilities.

⁴Net fixed investment is all noncurrent assets.

work to reshape it. The physical structure, however, will probably remain essentially unchanged.

Organizational

Cooperative growth, particularly through business ventures

Figure 4
Aggregate Sales and Net Margins of 15 Regional Grain Cooperatives, U.S., Fiscal Years ended in 1974-82

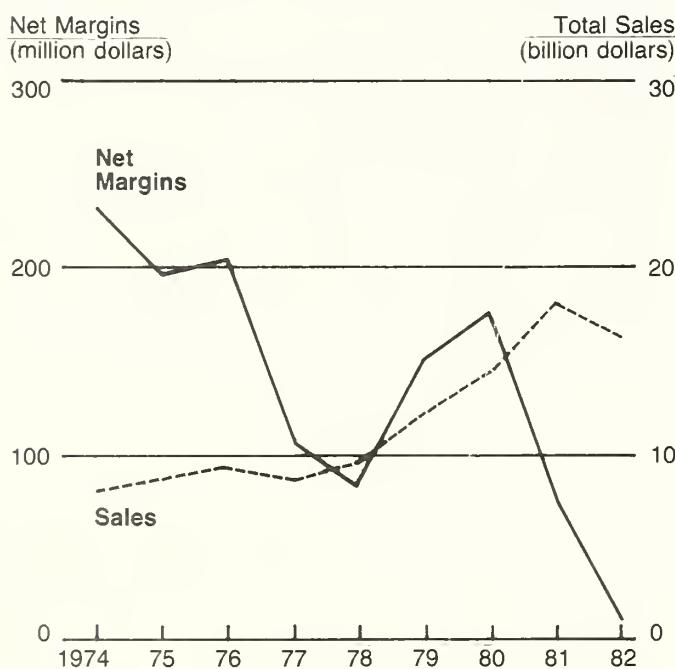


Table 10—Aggregate operating statement for 15 regional grain cooperatives, fiscal years ended in 1974-82¹

Year	Total income	Sales	Total expenses	Net margins ²
Million dollars				
1974	8,151	8,064	7,918	233
1975	8,837	8,721	8,639	198
1976	9,382	9,281	9,180	202
1977	8,959	8,862	8,854	105
1978	9,981	9,760	9,898	83
1979	12,415	12,325	12,264	151
1980	14,653	14,515	14,476	177
1981	18,265	18,092	18,190	75
1982	16,409	16,138	16,400	9

¹ Excludes one regional because certain comparable data are not available.

² Total income minus total expenses, before taxes and patronage allocations.

like mergers, has brought about a more complex organizational structure. Such growth often occurred to address an immediate problem, with little thought given to possible future consequences. Most regionals and the interregionals are the product of cooperative ventures engaged in by locals and regionals, respectively. Although the

Table 11—Condensed balance sheet for farmer cooperatives marketing principally grains, 1977, 1979, and 1980¹

Item	Year ²		
	1977	1979	1980
Number of cooperatives ³	1,793	1,804	1,792
<i>Million dollars</i>			
Assets:			
Own grain cooperative	3,852	5,139	6,695
Investments in other cooperatives	635	712	810
Total	4,487	5,851	7,505
Liabilities and member equity:			
Total liabilities	2,263	3,299	4,647
Member/patron equity	2,224	2,552	2,858
Total	4,487	5,851	7,505

¹ Includes soybeans and soybean meal and oil.

² Fiscal year, 1977; calendar years, 1979 and 1980.

³ Many cooperatives are multiproduct and multifunctional in their operations, and were classified according to predominant commodity or function indicated by business volume.

Table 12—Distribution by volume of assets of the number of cooperatives engaged principally in grain marketing, 1977, 1979, and 1980¹

Item	Year ²		
	1977	1979	1980
Number of cooperatives ³	1,793	1,804	1,792
<i>Percent of number</i>			
Value of assets (millions):			
\$ 100 or more	0.2	0.2	0.4
25.0 - 99.90	.4	.7	.6
10.0 - 24.90	1.0	2.2	2.6
5.0 - 9.90	3.7	5.2	6.2
1.0 - 4.90	70.2	68.8	74.2
0.5 - 0.99	11.1	14.2	11.0
0.1 - 0.49	8.3	7.3	3.1
Less than 0.1	5.1	1.4	1.9

¹ Includes soybeans and soybean meal and oil operations.

² Fiscal year, 1977; calendar years, 1979 and 1980.

³ Many cooperatives are multiproduct and multifunctional in their operations and are classified according to the function from which most revenue is derived.

nature and specific purposes of the venture vary, the common objective is to improve organizational performance in the market place and thereby benefit producer-members. Key to the success of any such venture and the successful operation of any grain-handling cooperative are the individual and collective performance of the board of directors and manager.

The federated system lost strength over the past 8 years as many local cooperatives, to gain efficiency, acquired the capability to load unit-trains or barges, bypassing the regionals. In addition, regionals established export facilities and are moving grain directly to foreign countries or other exporters, sometimes bypassing the interregionals. This has led to concern throughout the cooperative grain marketing community over whether the federated organizational structure, without commitment and performance contracts, is the best system.

Federated cooperatives are usually more practical for larger membership areas because of the travel distances involved. However, plant supervision, decisionmaking, and communication become more complicated when locations are widely scattered. Locals often want the federated regional to be responsible for advertising and product promotion, marketing, processing, handling surpluses, and overall market contracts. Locals also look to their federated regional to arrange and coordinate grain shipments.

The mergers of regional cooperatives that have occurred during the past few years have shown it to be a successful organizational change. This should hold true for regionals whose trade territories overlap and where locals are members of more than one regional. Even if there is no territorial overlap, a merger may be feasible to bring about economies in management, grain marketing, services, and financing. The regional and its locals should look at alternative forms of organization for possible advantages over the present form. Such forms might include (a) modification of the federated organization, (b) adoption of a centralized organization, and (c) modification of a centralized organization.

The federated organizational structure might, for example, be modified to entail separate marketing by large multicounty or multilocation cooperatives, a major reduction in the merchandising role of regionals, and an increase in marketing services by the regionals. Such organizational changes at the local or regional level must be accompanied by improved management and be preceded by thorough analysis, evaluation, and planning.

The best cooperative organization for export grain marketing has not been established. Cooperatives' present and past experience in export marketing does not necessarily reflect a basic fault in the type of organization they chose. It does reflect the precarious nature of that type of organization when the owners and hired management fail to adopt and

implement the necessary policies to safeguard the investment of members. Perhaps an alternative type of export organization similar to INTRADE, but owned and controlled solely by U.S. cooperatives, could function more effectively. Such an organization should have the ability to acquire grain from all world sources, and would have the expertise and financial resources to trade not only in grain but other commodities as well.

In this context, the role of the interregional grain marketing cooperative should be reviewed, clarified, and possibly revised. This would require the regionals to address and resolve the commitment issue.

Boards of directors and management of grain-handling cooperatives are being severely tested by the rapidly changing situations with respect to grain supply, farm programs, domestic and world markets, government regulations and deregulation, economic conditions, interest rates, and competitor actions. As a result, they have become more effective grain merchandisers, in many cases with improved business management techniques. Marketing the increased volume of grain produced in the 1970's and up until 1983 was made possible by elevator facility expansion, the Government's on-farm grain storage program, an increased sophistication of elevator and office equipment, and changes in the transportation system. Rail transportation problems, embargoes, and increased Government regulation, in particular, were major factors that made this a difficult time.

Cooperative boards and management have also been challenged by important changes on the farm during the past decade. Grain producers decreased in number, but grew in size and sophistication. These fewer producers, with increased grain marketings, have become more self-reliant in the storing, transporting, selling, and hedging of grain. The use of home computers for recordkeeping and market planning is on the increase. Some producer-members have equaled or even surpassed their local cooperatives in some phases of the business, such as hedging. How producer-members view their cooperative is likely to depend greatly on whether and how well cooperative management has adapted to changing conditions.

Having to adjust in the early 1980's to a sluggish economy, high and variable interest rates, slowing demand for grain, and low or negative net margins has made the board and management of many cooperatives become survival conscious. Plans for survival could include merger, acquisition, expansion of trade territory, diversification, or some combination. As larger, more complex cooperatives emerge, the challenges to and responsibilities of boards and management increase.

U.S. cooperatives face a challenge in grain procurement and marketing from foreign interests like Japan. The Japanese are

engaged in direct grain procurement in the Midwest for export to Japan through their port facilities on the Pacific and Gulf coasts.

The increased size and complexity of these cooperatives has normally been accompanied by changes in board size and composition. Although it has been attempted, there is general resistance to reducing the number of board members, the thought being that smaller boards underrepresent the membership. Boards of directors, particularly at the regional level, are steadily being upgraded by including professionals with business experience, like bankers and accountants, and generally by placing increased emphasis on higher education.

A substantial turnover of key cooperative management personnel has occurred since the late 1970's. Traditionally, managers moved slowly up "through the ranks" to top-level positions. In recent years, the increased complexities of management have resulted in recruitment of managers from both cooperative and noncooperative sources. Several regional cooperative executives hired in the past few years came from noncooperative grain businesses. Other efforts undertaken to improve cooperative management include recruiting and developing better personnel, implementing effective management information systems, and using management consultants.

Domestic Grain Marketing

The development having the greatest impact on and requiring the biggest adjustment by grain-handling cooperatives was the increase in foreign demand for U.S. grain in the early 1970's, followed by its stagnation at the close of the decade. Other changes requiring considerable adjustment include rail deregulation and abandonment and the dramatic shift to the unit-train handling of grain. Developments of lesser importance are the widening use of electronic marketing aids and the offering of marketing services by grain regionals.

Commitment and Procurement

A principal concern of cooperative management is the growing lack of member commitment. The grain producer tends to sell at the best price, often discounting the value of the services and overall benefits provided by the cooperative. Thus, even though the producer invests in the cooperative, obligation to doing business with the cooperative is often lacking.

Similarly, the local cooperative does not adequately patronize its regional cooperative. Specific comments made by representatives of the cooperative community concerning grain procurement focus on the failure of locals to sell adequate grain volumes to the regional. The large grain

volumes needed to support their fast loadout facilities has forced many cooperatives to intensify competition with their neighboring cooperatives and their regional.

Regionals, also, have been weak at times in their commitment to the interregionals they own, particularly with regard to the assembly of grain for export. The failure of grain-handling cooperatives to fully support the cooperative grain marketing system with committed grain volumes has forced regionals and interregionals to purchase large volumes of nonmember grain, including grain from sources that are sometimes in competition with their members.

Cooperatives need to devise a procurement and pricing system that retains more grain in cooperative channels from the farm through the local to the regional. The formal commitment or written agreement associated with the pooling of grain has been suggested as a solution, but it hasn't worked in the past because individual producers prefer to seek the best price on their own. If grain-handling cooperatives are to be effective, producer-members need to make a strong commitment to the marketing system. At the same time, the producer must have assurance that grain prices are competitive.

Intercooperative Relations Intercooperative relations in the area of grain procurement are generally good. Regionals and locals have usually been able to coordinate their functions and effect the efficient procurement and marketing of grain. Some cooperatives, however, have expanded their trade areas into those of neighboring cooperatives. A development of particular concern is the growing procurement competition between the large local cooperative and its regional grain cooperative. This frequently occurs when both the large local and the regional compete directly for the same grain from producers without marketing cooperation. Such a situation represents a duplication of effort that causes unnecessary expenses.

Grain Transportation

The sharp increase in foreign demand for U.S. grain during the early seventies also produced a demand for rail hopper cars and barges. Noncooperative grain businesses and many grain-handling cooperatives that expanded existing or built new loading and handling capacity to accommodate unit-trains also invested in transportation equipment. Rail cars, mostly the covered hopper type, were bought and leased, and the use of boxcars for grain declined.

Numerous rail lines were closed or abandoned in grain-producing areas during this period, as the railroads acted to streamline their operations. Part of the streamlining was to accommodate unit-trains as well as reduce costs. This increased transportation costs for many small and some large

elevators and many found themselves without rail service. Most were able to turn to trucking or bought the abandoned lines and continued to operate. However, the increased cost of shipping grain in this type of situation resulted in lower producer prices and often led elevators to explore the possibility of working out some type of joint grain marketing arrangement with other cooperative elevators in the area.

When grain export demand leveled off in the early 1980's, railroads were left with an excess of covered rail hopper cars. Because of this excess, some carriers altered traditional car use requirements. Some allowed only one private car for each carrier-owned car. In most cases, both railroad and privately owned covered hopper cars were and are sitting idle. Thus, many cooperative grain shippers were and are forced to continue making lease payments on idled cars. Many cooperative shippers are not renewing leases, typically of 5 years in duration, upon expiration. Barge leasing has likewise diminished.

Another significant development in the transportation area, the full impact of which has yet to be felt, is deregulation. The rail and truck deregulation acts of 1980 already have had a substantial impact on the grain industry.

Some provisions of the Staggers Rail Act of 1980 have affected grain merchandising. These involve railroad pricing flexibility, rail contracts for confidential rates and specialized service, cancellation of joint rates and routes and/or reciprocal switching agreements, and more relaxed and expedient rail abandonment procedures. Carriers have closed some routes to participation by other carriers. Rail abandonment is now easier. Secret contracts favor high-volume shippers. Small shippers express confusion regarding the legality of joint shippers to bargain collectively in negotiating rates. Grain shippers feel the ICC's requiring rail contracts to be kept secret limits necessary market information for the efficient and expedient flow of grain through the domestic and export grain pipelines.

The Motor Carrier Act of 1980 relaxed restraints on truck carriers and should reduce costs. New backhaul opportunities will attract more traders into hauling agricultural commodities and should also help reduce rates.

Congress plays an important role in the area of water transportation, which is another problem for grain shippers. Inadequate lock capacity is the most important constraint on the inland waterway system. All barges negotiating the Upper Mississippi and Illinois Rivers systems must pass through Lock and Dam No. 26, a major shipping bottleneck on the Mississippi. A new lock is scheduled for completion in 1988, but is projected to reach capacity by 1990. Another navigation constraint is the Bonneville Lock on the Columbia River in the Northwest. Barge tows passing through this lock must be broken apart, which causes considerable delay.

Financial

The substantial growth in size and scope of grain-handling cooperative operations during the past decade required a large investment in new plants and equipment. The amounts of capital borrowed for expansion and new construction resulted in many cooperatives' being in a highly leveraged financial position. This position was compounded in many cases by the slowdown in the late 1970's and downturn in the early 1980's in grain exports and the 1983 PIK program. The increased grain volume and favorable margins expected did not materialize. The preceding factors forced some cooperatives to scale back their operations by selling off assets and reducing staff. Many of these liquidated assets were purchased by competing noncooperative businesses.

Variable interest loans to cooperatives makes planning harder today. This type of loan makes it mandatory to more carefully consider and evaluate financial requirements. For example, borrowing money to renovate an older facility or build a new one now involves more risk and requires more evaluation and planning. Cooperative management is coming around to recognizing the value of long-range financial planning and an ongoing financial analysis of their operations, especially in view of today's economic environment.

In contrast with the 1970's, cooperatives find themselves in today's lean times having to pay out patronage that was allocated in the good years. Serious thought should be given to developing a better system for revolving equity. Current patron users should be financing operations.

Members often do not concern themselves with the reasons for their cooperatives' policies on patronage dividends. Many expect an increased cash patronage dividend and added services in a year when the financial condition of the cooperative will not permit it. They apparently neglect the fact that it is easier to finance a hard-pressed cooperative by foregoing their patronage dividend than by making a direct cash outlay.

Cooperative Exporting

Marketing grain for export is one way cooperatives increase the value of their producer-members' grain. In the early 1970's, grain cooperatives saw the potential for improving margins associated with the rapidly increasing export demand for U.S. grains. They responded by adding grain handling facilities for that purpose. Grain volumes handled increased substantially and net margins improved sharply in the 1970's. At the same time, the volatility and risk exposure that typify the export markets also produced some losses and setbacks.

A challenge that remains is for cooperatives to develop a strong export marketing system to fully realize their potential. Cooperatives need to be competitive in grain marketing in

both the origination of grain at the local level and the assembly of grain for export. A weakness at either level can materially weaken the entire cooperative grain marketing system. They have the "grass roots" volume available and the expertise for domestic and f.o.b. sales through individual regionals. However, cooperatives up to this point have not been able to successfully centralize and coordinate a marketing system that is powerful enough to compete with the international traders and multinational grain firms.

Two interregional grain cooperatives, Farmers Export Co. (FEC) and Mid-States Terminals, owned by several grain regionals, have been instrumental in the expansion of U.S. grain exports and in expediting exports for members. During 1975-82, both increased their port elevator handling capability, and their combined export volume was three times larger in 1981 than in 1975. Most of these sales were f.o.b. vessel, because any possibly better margins for c.i.f. sales generally were not thought adequate to cover the increased risk associated with such sales.

FEC made a major effort to increase its export involvement in the late 1970's by expanding facilities and volume. With its three export elevators (Ama, La.; Galveston, Tex.; and Philadelphia, Pa.) and four new regional members, FEC was able to sell and ship in excess of 700 million bushels in 1980. As a part of the expansion effort, it established a sales office in Japan, improved sales agencies in other foreign nations, and aggressively sought better markets. However, in 1980, FEC suffered market losses totaling more than \$40 million. Consequently, FEC sold its Galveston elevator to FAR-MAR-CO and reduced its Philadelphia port elevator operations. In 1982, FEC operated principally through its Ama port elevator, and appeared to have improved its position with 6 members instead of 12.

During this same period, Mid-States Terminals expanded its storage capacity in Toledo, increased volume, and maintained a steady marketing policy under continuing management. Its membership dropped from four to three.

Cooperative involvement in grain exporting provides the producer with substantial information on future developments and opportunities in foreign markets. However, producers differ in how they value the benefits of cooperative grain exporting and in the degree of commitment they are willing to make.

U.S. Share of World Market

The U.S. share of the world grain trade is about 52 percent, the same as 10 years ago and trending downward. This is because demand in many importing nations has dropped from

the effect of worldwide recession, and the rivalry of grain exporting nations has intensified. Also, recent good harvests increased pressures on some exporting nations to improve their world market share.

Another recent development that is expected to contribute to a projected 4-percent decline in the current U.S. share is the high and rising value of the dollar. As the dollar has been appreciating against the currencies of other exporters, their grain prices have lowered and exports have increased considerably.

LOOKING AHEAD

The decade of the eighties was launched by a grain embargo against the Soviet Union. This was joined by a rise in the value of the dollar and a worldwide recession. U.S. grain exports began to decline, but farmers continued to gear production to the growth in exports that typified the 1970's. Surplus quantities of selected grains rapidly developed, commercial and farm storage facilities filled up, and the payment-in-kind (PIK) program was born.

With an expected export market growth rate in the 1980's much slower than in the 1970's as background, this new set of circumstances is forcing grain-handling cooperatives to take a closer look at their operations, stress operating efficiency, consider value-added benefits, and sharpen management skills. Grain-handling cooperatives' growth will require strategic evaluation of plans and objectives vis-a-vis competitors.

Organization

Organizational change is frequently associated with unification actions such as mergers, consolidations, and acquisitions, which were discussed earlier. Such actions benefit cooperative members through an increased sales volume, improved marketing expertise, and a greater planning capability.

Merger will become increasingly important to the grain marketing system, from regionals to small local grain elevators. Those carrying farm supplies and offering other related services will find that, as the competition within the trade area becomes more severe, they will need to seriously consider merging with one or more of the competing cooperatives.

At the same time, some managers indicated that regional cooperatives need the authority from their membership to deal in grain regardless of where it is produced so long as it benefits the American producer.

The traditional country elevator will become the purchaser of grain from small-volume producers and receive residual grain

from the larger farmers. Maintaining a profitable operation with a smaller volume will mean many locals also will have to offer additional services. The locals may act as a marketing agent, which would require them to have personnel who would be abreast of all marketing alternatives, handle risk management, and possibly arrange transportation for local members.

The emergence of large local cooperatives that service areas as large as several counties, or even larger, will continue. These will generally have one unit-train grain loading facility on a main rail line. Some large locals also may acquire the capability to load barges. The elevator branch locations may be open only during the harvest and planting seasons. At least major managerial decisions will be made from a centralized location. These cooperatives will compete with the regional cooperatives in grain sales operations.

More grain will be stored on the farm in the future and will bypass the local elevator on the way to a shipping facility. Many larger farms will acquire grain handling and blending capabilities. These factors will result in more price shopping by farmers.

Probably the biggest change will be in the makeup of the farming community. As farms dwindle in number but grow larger and production becomes more specialized, producers will demand more specialized marketing services, such as direct access to terminal or subterminal markets. They will demand marketing services such as risk protection through futures hedging and contractual sales arrangements. Some will try their own hand at this when dissatisfied with available services.

Vertical growth is an option for some grain marketing cooperatives. They have the raw products and could develop and implement a processing capability. However, it is important that the steps they take be well conceived and planned, provide sufficient volume, and lead to well-run, low-cost operations with an effective sales program.

Vertical growth will require cooperatives to move from raw grain sales to operating plants that require large capital investments and will entail increased marketing risks. Much of this can be overcome by the centralization of cooperative processing operations. An example of such a development is the recently established Ag Processing, Inc.

Facilities and Services

Most of the existing well-equipped facilities will remain in use, but many older and/or smaller facilities, particularly those that are out of position, will be used seasonally as collection points or abandoned. Some smaller facilities will be retained in conjunction with farm supply operations. Most new larger elevators will be used as the primary handling and storage

facilities. Cooperatives with elevators at two or more locations on different railroads will be able to compete effectively in different markets.

Local cooperatives without unit-train facilities may find themselves at a competitive disadvantage. Those unable to make an independent marketing adjustment to be competitive generally have the following alternatives:

- Let grain volume decline and increase farm supplies and/or services offered.
- Arrange to let producer-members haul directly to a nearby cooperative subterminal under a marketing agreement.
- Join with other local cooperatives in establishing and owning a new subterminal with unit-train capability.
- Merge with one or more nearby co-op elevator and build or modernize a facility to have unit-train capability.
- Truck grain to the nearest co-op elevator with unit-train capability and pay a put-through fee.
- Ask the regional to build a subterminal in the area.
- Sell or close the elevator.

The current Government on-farm storage program promotes the building of storage facilities that will enable farmer-members to store their surplus grains and give them greater marketing flexibility. Farmer-members with larger trucks will be able to move grain to the market that offers the best price.

Facilities in various sections of the country are not equipped to handle all grains. The question is whether they should be. Also, there are too many grain-loading facilities in many areas of the United States. The strategic location of an elevator is essential and in some areas the facilities are out of position. The best location is at an all-weather crossroads and close to a major highway system, with easy access to at least one major rail line; better yet if situated on two lines and outside a congested area.

Cooperative Control

Cooperatives need to maintain a flexible structure so they can readily make adjustments to benefit from ongoing changes. Cooperative board and management complexity is intensified by the very nature of cooperative organizational structure. As cooperatives become more diversified and grow larger, their responsibilities greatly increase.

Sound long-range planning by boards and management may well be the most important factor in the success of grain-

handling cooperatives in the 1980's and beyond. Cooperative boards and management must realize the value of long-range planning and its associated strategies, particularly in view of the growing complexity of grain marketing. The increasingly competitive grain marketing environment means managers and directors will need upgraded education and/or experience.

Marketing

Cooperatives have considerable unrealized potential for improving grain marketing. This can be realized only by strengthening the positive relationships among cooperatives and by eliminating the weakened relationships. Cooperatives must explore new marketing opportunities in both the domestic and export markets. This includes increasing sales to food and feed processors, direct and indirect sales to the export markets, and specialized marketing programs associated with specialty crops such as high lysine corn, edible soybeans, malting barley, and durum wheat. It also includes processing grain and oilseed crops that may provide a higher return on investment. All grain cooperatives need to develop a program to increase volume to be able to maintain adequate margins.

Procurement

Future procurement practices will take on a new look as cooperatives adjust to keep pace with the changing needs of members and customers. Local as well as regional cooperatives will be offering more types of pricing arrangements for their grain products. Traditional marketing areas will change drastically as regionals expand into grain procurement areas of others. Regionals will increasingly find it necessary to buy directly from large farmers to obtain the grain volume needed to compete effectively with multinational companies.

Of immediate concern is the growing practice of noncooperative subterminals buying direct from producers at the same price they pay local elevators. This practice encourages producers to haul their grain direct to the subterminal rather than to the local elevator. Locals simply cannot compete and there is little their regional can do to help if it doesn't have a facility in their area. This trend can limit or reduce the grain volume of regional cooperatives as well as local cooperatives. It appears this situation is exerting pressure on the local cooperative or the regional to have a shipping elevator in such an area. Regardless of who does it, the cooperative marketing system will change. If the regionals perform the functions, a centralized regional is likely to develop and local cooperatives will decline or handle only farm supplies. If the local cooperative performs the subterminal functions, it may mean merchandising its own trainloads of grain and becoming independent of the regional. Accommodation of each level to the other is essential to the

future design of the cooperative grain-handling system.

Innovative procurement methods are likely to emerge in the 1980's, limited only by the imagination of the designer. Many of today's procurement practices were in the idea stage just a few years ago. Many of the ideas being formulated today will become tomorrow's standard operational procedures. If management fails to innovate, cooperatives will take a back seat in grain marketing and procurement.

Some cooperatives are showing such imagination by offering pooling. Most grain cooperatives that offered pooling operations in the past experienced low participation and now offer this marketing arrangement only if there is enough interest by producers. Two have shown limited success: FAR-MAR-CO's Promark and Riceland's Seasonal Soybean pool.

The Promark Pool, started in 1975, offers wheat producers a marketing tool to help them improve earnings through their local cooperatives and to help assure a dependable wheat supply for the regional. Because FAR-MAR-CO is a federated regional, the initial marketing agreement is between the producer and the affiliated local. The local then enters into an agreement with FAR-MAR-CO. Operationally, the initial payment to producers amounts to 70 percent of wheat's loan value. Progress payments are made throughout the marketing year and a final payment when the pool is closed. The regional merchandises the grain throughout the year.

Riceland markets about 50 percent of its soybeans through its soybean pool. The producer appoints the cooperative as the marketing agent and makes delivery at harvest or a mutually agreeable date. The cooperative may use the soybeans as collateral and has complete discretion in all sales of either raw beans or processed products. Initial advances and payments to growers are made throughout the marketing pool year.

Services

Regional cooperatives must improve their marketing services to local cooperatives and producer-members. Similarly, locals must improve marketing services to producer-members and can with the help of the regionals. Cooperatives must anticipate marketing demands, offer services, and maintain a flexible structure to benefit from changes in marketing needs. For example, some advocate an arrangement whereby regionals can buy grain directly from farmers with a tolling system to the local cooperative that is bypassed.

An increasing number of local elevator managers are acquiring an appreciation for effective hedging and other marketing practices, such as delayed pricing and daily basis plotting. This interest was spurred by the low margins associated with widely fluctuating grain prices and rising operating costs typifying the late 1970's and early 1980's.

Local cooperatives and producers need advice and assistance to evaluate their grain marketing alternatives. Regionals can provide frequent market information and the techniques for evaluation. One such service might include a system for evaluating the net margin position on cash and futures transactions. Such services would help mold a tighter knit cooperative, although it might involve a service fee. New developments in micro- and mini-computers may greatly enhance the cooperative's performance in the areas of pricing and hedging, grain accounting, position accounting, price collection and dissemination, inventory management, feasibility analysis, calculating rates of return on investment, and providing information services to members.

Another service that has been implemented already by many regionals is a subsidiary or internal group to provide commodity services to local cooperatives and, in some instances, to individual, large-volume grain producers.

Transportation

Many of today's problems and changes in the transportation area will continue to have a significant impact on grain marketing. Traditional geographic grain movement patterns are subtly changing to reflect rail abandonment, railroad mergers, proliferation of unit-train rates, and growing farm and commercial storage capacity. Imposition of port and waterway user fees and highway taxes will cause further changes in grain movement patterns. The U.S. grain transportation industry and grain-handling cooperatives are faced with these short- and long-term issues:

- Additional waterway fuel tax increases (imposed by Waterway Act of 1978).
- Proposed waterway and port user fees (if implemented, will most likely be implemented after 1985).
- Rail line abandonment will continue and perhaps become more intensive and broad reaching due to carrier mergers and efforts to reduce duplication of lines and services in some areas.
- Conrail will be sold and more abandonment of Conrail lines will occur.
- Rail rates will rise in relation to increasing water freight rates and supply/demand of equipment.
- Surplus of shipper-owned/leased covered rail hopper cars.
- Increased use of rail rate and service contracts.
- Rail carrier efforts to control rail cars.
- Continued joint rate and route cancellations; discontinued reciprocal switching.

Funds made available from the recently enacted "Surface Transportation Act of 1982" will most likely be applied to those rural roads and bridges designated as most seriously in need of repair. Unfortunately, this means only a small percent of the already limited number of eligible rural miles and bridges will receive any benefit from a law that significantly increases the cost of transporting grain by truck. Recent transportation trends of the use of larger farm trucks and direct farm-to-terminal shipments will serve only to magnify the structural road and bridge problem. Continued rail line abandonment will only aggravate this situation.

Deregulation

Deregulation permits the transportation industry to operate in a more competitive environment. Rate and service innovations affecting grain shippers implemented under the transportation deregulation acts of 1980 have generally been complicated. The impact of such innovations undoubtedly has been moderated by the grain industry conditions and economic climate that prevailed in 1980 and have remained essentially unchanged since. Thus, it is too soon for an accurate assessment of the impact of deregulation on the grain industry.

Rail The Staggers Act gave the railroads freedoms that will affect the grain industry for a long time. Grain shippers will be influenced by new ratemaking and service opportunities, a shortened rail abandonment process, surcharges for light-density line service and switching, restricted use of joint line routing, and secret contracting for lower rates and special services. The long-term impact of these new rail freedoms is unknown. Many questions remain but one thing certain is that transportation advantages will accrue to the large-volume shippers.

One great concern is an increasingly complex rate structure. For many grain shippers, it has become difficult and time-consuming to determine the freight rate applicable to a shipment of grain. Forward contracting has become increasingly more uncertain, since freight rates can fluctuate virtually overnight and many times within the traditional 90-day delivery period.³ Specific short-term contracts will gain in popularity. Recently, the ICC decided to permit contracts to become effective in 24 hours.

Shippers and the railroads continue to experiment in the area of the "rail rate and service contracts" specifically legalized in the Act. Confidential contracts for special services and secret rates, although controversial, are expected to gain more use

³Source: USDA, An Assessment of Impacts on Agriculture of the Staggers Rail Act and Motor Carrier Act of 1980, Office of Transportation, Aug. 1982.

over time. The railroads will become more accommodating to the grain industry, permitting relatively short-term contracts so shippers can take advantage of spot grain markets.

Eventually, contracts may be the only way in which owners or lessors of private covered hopper cars will be able to continue to utilize their equipment. In addition, special services will receive added emphasis in future rail contracts, especially for shippers incapable of moving larger units of cars. The use of contracts will eventually become commonplace.

Rail tariffs will become increasingly complex. The most favorable rates will remain available to multiple car shippers. But one-, three-, and five-car shippers may be able to gain back some competitive position if shippers push for greater accessibility to the so-called "gathering" or "shuttle" rates available to some shippers. Recent indications are that carriers are becoming increasingly reluctant to continue providing such rates.

The grain industry and the railroads are still in a "feeling out" process as both learn more about transportation and antitrust laws. Recent developments indicate ICC is becoming more lenient in granting "short notice" contracts, and a new rule-making proposal would result in contracts becoming effective on the filing date with the contract services or rates beginning immediately. Implementation of these rules would significantly affect the grain marketing of many agricultural firms. Electronic filing of tariffs will soon be recognized by the ICC. Such services will affect businesses able to take advantage of the new environment.

Truck The interstate movement of grain by truck had been exempted from ICC regulation for more than 45 years prior to the Motor Carrier Act of 1980. Grain shippers indicated that this situation, coupled with the recession, made it nearly impossible to judge the impact of this Act on grain marketing. Truckers should, however, be able to maintain their share by supplying grain to feedlots, rail and river terminals, and export points in shorthauls.

Rail Abandonment

The Act shortened the time required to process abandonment applications. The ICC has granted nearly 95 percent of all abandonment applications since enactment of the Act. Carrier mergers and the continued movement toward a true transcontinental rail system will expedite rail abandonment. Market research for evaluating future elevator investments will be imperative.

Inland Waterways

The costs of operating and maintaining the U.S. inland waterways system in the future probably will be passed on to its users in the form of user fees. The extent to which grain prices will reflect the user fees will have a direct bearing on the

well-being of grain producers and the degree to which the United States will be able to compete in world grain markets.

The present supply of covered barges (more than 12,000) should meet the demand for river transportation facilities through the year 2000. Waterway restrictions, however, are expected to limit the increased use of barges on the Mississippi River until at least 1989 when the completed Lock and Dam 26 is in operation. Future completion of the Tennessee/Tombigbee complex will provide some relief by diverting some grain shipments from the Ohio and Tennessee Rivers.

Exporting

Regional grain cooperatives need an export marketing system that has considerably more market power than does their present one. Key elements of such a system are member commitment, director control, a financial base, risk management, market penetration, expertise in marketing, foreign exchange, and shipping. Regional grain cooperatives have the potential to, and should, be in a position to ship grain from any U.S. coast.

Regionals and interregionals selling in the export market individually have some marketing intelligence and contacts in various foreign countries. If they were to work together, they could avoid duplicate effort, reduce unit costs of selling, pool knowledge of markets, and develop a greater capability in the export market. Cooperatives can collectively develop improved market intelligence and strategies for developing potential markets abroad.

The success of cooperatives in grain exporting is dependent to a large extent on their ability to identify and monitor emerging world market trends. Such trends may suggest strategies that will be successful in the future. Thus, a starting point is to analyze the developments that affected the grain export industry during the past decade. Many of these developments may have long-term significance. The most important trends are related to supply and demand conditions and to the market intervention policies of governments. Although world economic conditions and the policies of foreign governments are factors that grain exporters cannot control, world developments are important to them in regard to making decisions.

Business Adjustments

Business organizations, including grain cooperatives, are adapting to today's more volatile economic environment. Businesses cannot change world policies and the economy, but they can adjust to maintain and expand their export activities, and in some cases improve their position relative to competitors that cannot adjust as effectively. Recent conditions of economic instability have given rise to at least

three important business trends that are affecting grain exporting: (1) exchange rate hedging stemming from currency fluctuation, (2) countertrading due to hard currency shortages, and (3) the sharing of agribusiness technology. These changes can be expected to continue and the trends to accelerate in the future.

The grain exporter with substantial involvement in large-scale contracts will have an advantage over competitors who are limited to smaller scale trading. This is because the greater movement of grain through their facilities and system lowers their per-bushel cost, and the greater the movement of shipments, the more options they have to buy and sell within their system. However, the high value placed by grain exporters on large-scale trading usually means that their effective servicing requires establishing foreign offices and employing other means of achieving presence in these markets.

Some U.S. grain exporters have been able to increase their sales by providing the service of assuming the risk of currency fluctuations over the period of a forward sale. Competition in the export industry may even place increased pressure on this risk factor in the future. Some importing countries are either unwilling to offer more favorable terms or are unwilling to trade at all in the absence of this service by the exporter. However, similar to the need to hedge price risks, exporters also seek earnings stability by adopting various hedging strategies against the currency fluctuation risk.

Multinational trading firms have flexibility in dealing with short-term currency fluctuations because they can reduce the risk by trading among their foreign divisions or subsidiaries. In transactions with outside parties, the multinational firm has a greater ability to spread risk, as does any diversified business. Grain cooperatives are clearly at a disadvantage in this regard. There are also methods of transferring earnings among country divisions to take advantage of changes in currency values. Multinational trading firms, and exclusively U.S.-operated businesses, also can hedge against currency fluctuations using the currency futures markets in New York and Chicago. There are plans for a futures market in ocean freight, which would mean direct grain exporters would be able to hedge against rate fluctuations.

The rise in less developed countries' (LDC) debt and hard currency shortages have caused a significant expansion of countertrade or the direct exchange of commodities rather than payment in currency. Usually countertrade results in at least one commodity being retraded to a third party for payment in currency. Data on how much grain is being countertraded are not readily available. It is believed that, although countertrade has been expanding rapidly and has accounted for about 30 percent of the value of world trade in recent years, probably little of it represents grains and oilseeds.

American trading firms are improving their capability to manage currency fluctuation and countertrading by integrating commodity trading with financial services. This has been an apparent source of strength for many of the Japanese trading companies. A few U.S. commodity trading companies that export grains and oilseeds recently merged with financial securities firms in order to strengthen their worldwide merchandising and hedging capability in both commodities and currency.

Legislative reform has come through the Export Trading Act of 1982. This act permits joint ventures among trading firms with significant protection from antitrust laws and ownership participation by banks. The latter feature is intended to strengthen the capability of American exporters in hedging currency risk and in developing effective techniques for helping buyers finance their imports.

The multinational grain firms that dominate the direct export trade are also actively involved in the ownership and operation of processing facilities overseas. This represents a transfer of U.S. agribusiness technology and an investment in foreign market development. In some countries, it is being carried out by grain exporters in either an advisory capacity or in joint-venture relationships with host governments or local firms. While U.S. cooperatives have not pursued overseas direct investment in handling and processing facilities, they have been active in foreign market development in an advisory capacity. Recently, Farmland Industries established a division, Farmland World Trade, to pursue opportunities in both countertrade and overseas joint ventures.

The expansion of foreign processing and subsidization are increasingly forcing capacity adjustments on U.S. processors of commodities. In response, U.S. processors are advocating policies that would promote value-added exports. If these policies were to be adopted, they would be directed toward the industrialized countries. The LDC's capacity for value-added imports from the United States is low. The public would benefit from value-added policies primarily in terms of greater domestic employment. Using this as a basis, a case could be made for the U.S. Government to take a stronger stand against countries that protect their grain, soybean, and livestock processing industries, or to subsidize value-added agricultural exports.

Alternative Exporting Strategies

Grain cooperatives have clearly demonstrated an interest in exporting over the past two decades, but the level of commitment and agreement on strategies have varied. Each cooperative has had different experiences with both domestic and export marketing. As a result, there is disagreement on how cooperatives should develop an export business and on what resources and services are required to be an exporter. Cooperatives have had success with different approaches to

exporting. In preparing for the future, regional cooperatives should examine their own approach to exporting in light of the experiences of other organizations. The following is a general review of some alternative strategies for cooperative grain exporting.

One of the more effective strategies for cooperative grain exporting has been the ownership of a port elevator by a regional cooperative or group of regional cooperatives with an origination area for serving the facility. Union Equity's ownership and operation since 1961 of a facility in the port area of Houston is exemplary. Other regionals such as Harvest States, Indiana Farm Bureau Cooperative Association, and Agri Industries have followed the same approach in operating a port elevator, either by a long-term lease or by ownership. Mid-States Terminals, an interregional, is an example of a group of smaller grain regionals operating a port facility.

The major problem with the present system of individual port elevator operations is that it results in some duplication and a division of cooperative grain volume that could be channeled into several large export sales. In 1979-81, Farmers Export Company (FEC) was pursuing a course of multiple-port-area coordination. Its success with this approach was short lived but it is noteworthy that FEC was the fourth largest U.S. grain exporter in 1980. FEC's problems were primarily managerial and intraorganizational. Although FEC has since been reorganized along the lines of serving a single port area, it did demonstrate some of the advantages of multiple-port exporting. While FEC's mistakes should be avoided, its accomplishment in moving toward nationwide coordination deserves future consideration.

Another alternative, one described briefly in an earlier section of this report, is INTRADE. Several features of INTRADE make it distinctive in terms of traditional grain exporting strategies. INTRADE is a company with one of its members, A. C. Toepfer International, continuing to operate as a world grain trader. The grain cooperative members have control over the grain trading division of the company and receive the right of first refusal on grain offered for export. A benefit to INTRADE members is that they receive world grain and feedstuffs market news and price data generated by Toepfer's trading activities. It is possible the INTRADE approach to exporting will continue to prosper and will expand its membership of American cooperatives.

Cooperative joint ventures for grain exporting can assume forms other than INTRADE. Farmland and Land O'Lakes have established special international divisions for exploring joint ventures with foreign countries that need a partner that can provide agribusiness technology and a reliable supply of grain, oilseeds, or feed ingredients that would supplement local production. Many of these projects are based on the idea of countertrade. For example, an American cooperative would export raw commodities for an overseas processing

facility. Processed products from that facility would be exported to hard currency markets and provide earnings that would pay for the raw commodity exports. As mentioned above, several agribusiness firms are exploring this strategy because of the monetary conditions of most countries in the world.

Banks for Cooperatives' Export Financing The Central Bank for Cooperatives' international services department gives the cooperative banking system the tools and expertise needed to assist farmer cooperatives in handling a wide range of international transactions.

The Central Bank plans to focus on financing and facilitating sales for cooperatives already engaged in exporting, while also helping cooperatives planning to export for the first time to identify and develop foreign markets. The Banks for Cooperatives will also handle export and import letters of credit and currency exchange transactions for cooperative exporters.

Direct financing of exports is available through the Central Bank for Cooperatives in the form of advances against collections, trade acceptances, factoring, open account, and banker's acceptances. In addition, the Central Bank, in cooperation with the Export-Import Bank (Eximbank) and the Foreign Credit Insurance Association (FCIA), is providing short-term repayment insurance to cover an estimated \$750 million in agricultural export sales in 1983. The policy provides coverage for political and commercial defaults up to a specified level, and is the largest insurance policy ever authorized by Eximbank and FCIA.

Specialization in Cooperative Grain Trading

Economies of scale is a widely recognized attribute of grain exporting. Cooperative grain elevators that participate in large-volume export grain transactions should be able to realize lower unit costs. Thus, they would be able to underprice other competitors in smaller sales situations or in any type of specialized long- or short-term trading arrangements. The economies of grain trading and industry trends should be monitored and adjustments carried out. A merger of grain regionals and the grain divisions of farm supply regionals to establish a specialized, large-scale trading cooperative might be a feasible alternative to the FEC system of 1979-81.

Effective specialization in exporting involves control of domestic grain trading activity. Part of the potential efficiency of a large grain trading cooperative is that it can allocate its volume to the highest priced market, whether domestic or foreign. Decisions such as selling smaller volumes to domestic buyers or channeling more volume into a large export transaction can be more effectively made by a single grain trading cooperative.

**U.S. Department of Agriculture
Agricultural Cooperative Service**

Agricultural Cooperative Service (ACS) provides research, management, and educational assistance to cooperatives to strengthen the economic position of farmers and other rural residents. It works directly with cooperative leaders and Federal and State agencies to improve organization, leadership, and operation of cooperatives and to give guidance to further development.

The agency (1) helps farmers and other rural residents develop cooperatives to obtain supplies and services at lower cost and to get better prices for products they sell; (2) advises rural residents on developing existing resources through cooperative action to enhance rural living; (3) helps cooperatives improve services and operating efficiency; (4) informs members, directors, employees, and the public on how cooperatives work and benefit their members and their communities; and (5) encourages international cooperative programs.

ACS publishes research and educational materials and issues *Farmer Cooperatives* magazine. All programs and activities are conducted on a nondiscriminatory basis, without regard to race, creed, color, sex, or national origin.